



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/843,423	04/25/2001	Michael D. Jenkins	X0104E	9325

7590 01/29/2007
ATTN: CHRISTOPHER TUCKER, PATENT AGENT
XYBERNAUT CORPORATION
SUITE 550, HYATT PLAZA
12701 FAIR LAKES CIRCLE
FAIRFAX, VA 22033

EXAMINER

XIAO, KE

ART UNIT PAPER NUMBER

2629

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/29/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 29, 30, 33, 34, 37-39, 42, 43 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Donnell (US 6,486,875) in view of Silverbrook (US 6,238,043).

Regarding independent **Claim 29**, O'Donnell teaches a wireless control device for electronic devices shaped as a writing instrument (Fig. 1), the control device comprising a first structure including electrical components comprising a microphone (element 33) enabled to receive audio input from a user to control electronic devices (Col. 3, lines 19-21), a speech processing circuitry (microprocessor), a power supply, (element 24) and a transmitter (Col. 4, lines 42-43) all in electrical contact with each other.

O'Donnell fails to teach incorporating a second structure including interchangeable function module, wherein the module includes at least one of a laser pointer, a writing implement, or a computer input device. Silverbrook, on the other hand, teaches a pen shaped modular device that includes interchangeable function modules (Figs. 1-12 and Col. 3 lines 34-42). It would have been obvious one of ordinary skill in

Art Unit: 2629

the art at the time of the invention to modify O'Donnell's invention to accept various pen modules such as laser pointers (Silverbrook, Fig. 7) and writing implement (Silverbrook, Fig. 11), because as explained by Silverbrook, these additional modules are provided to add versatility to the invention as laser and writing instruments are commonly incorporated into pen-like structures (Col. 5 lines 1-2).

Regarding independent **Claim 38**, O'Donnell teaches a wireless control device (O'Donnell, Figs. 1 and 2) comprising a fuselage formed in the shape of a pen including electrical components comprising speech-processing circuitry (23), a power supply (24), and a transmitter (Col. 4 lines 42-43), all in electrical contact with each other and terminating in a top and bottom portion of the fuselage. The top portion of the fuselage includes a microphone electrically connected (Fig. 1 element 33), connected to the electrical components of the fuselage, where the microphone is enabled to receive audio input from a user to control the electronic devices (Col. 3 lines 19-21 and Col. 4 lines 57-61).

O'Donnell fails to teach a removable tip adjacent to the bottom portion of the fuselage comprising a function module, wherein the function module includes at least one of an ink pen module, a lead pencil module, a laser pointer module, or a roller ball mouse module. Silverbrook teaches a pen shaped modular device that includes interchangeable function modules (Figs. 1-12, Col. 3 lines 34-42). It would have been obvious one of ordinary skill in the art at the time of the invention to modify O'Donnell's invention to accept various pen modules such as laser pointers (Silverbrook, Fig. 7) and writing implement (Silverbrook, Fig. 11), because as explained by Silverbrook, these

additional modules are provided to add versatility to the invention as laser and writing instruments are commonly incorporated into pen-like structures (Col. 5 lines 1-2).

Regarding **Claims 30 and 39**, O'Donnell's disclosure does not explicitly teach a button to enable control however, Silverbrook in his disclosure does (Silverbrook, Fig. 7 element 72). It would have been obvious to one of ordinary skill in the art at the time of the invention to add the control button as taught by Silverbrook into the system of O'Donnell in order invoke command to the controller of the microprocessor in the pen.

Regarding **Claims 33 and 42**, O'Donnell teaches a pen with a housing, but fails to teach that the pen be constructed in an abrasion resistant material.

At the time of the invention, it would have been an obvious matter of design choice to a person of ordinary skill in the art to manufacture O'Donnell's input pen with an abrasion resistant material because the applicant has not disclosed that making the pen out of abrasion resistant material provides an advantage, nor used for a particular purpose or solves a stated problem. Therefore it would have been obvious to make O'Donnell's device out of abrasion resistant material in order to prevent damage to the device.

Regarding **Claims 34 and 43**, O'Donnell teaches that the power supply is a battery (O'Donnell, 3 lines 1-5). O'Donnell fails to teach that the battery is rechargeable. The examiner takes official notice that rechargeable batteries are well known in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to use rechargeable batteries instead of generic batteries in the device of O'Donnell in order to increase reusability.

Regarding **Claims 37 and 46**, O'Donnell further teaches that the electrical device is a computer (Col. 2 line 31).

Claims 31 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Donnell (US 6,486,875) in view of Silverbrook (US 6,238,043) as applied to Claims 29, 30, 33, 34, 37, 38, 39, 42, 43 and 46 above, and further in view of Van Ruymbeke (US 6,380,930).

Regarding **Claims 31 and 40**, O'Donnell teaches the use of wireless data transmission, but fails to teach the use of Bluetooth technology. O'Donnell teaches that TF is not the only wireless transmission alternative and leaves the particulars of the wireless transmission to those familiar to the art (O'Donnell Col. 4 lines 42-44).

Van Ryumbeke teaches that Bluetooth is a well-known universal wireless interface between computer devices (Col. 1 lines 28-34). It would have been obvious to one of ordinary skill in the art at the time of the invention to use Bluetooth wireless transmission in O'Donnell's invention to assist with the portability of the pen device from system to system.

Claims 35, 36, 44 and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Donnell (US 6,486,875) in view of Silverbrook (US 6,238,043) as applied to Claims 29, 30, 33, 34, 37, 38, 39, 42, 43 and 46 above, and further in view of Pertrushin (US 6,151,571).

Regarding **Claims 35 and 44**, O'Donnell fails to teach the use of an ADC in the audio processing circuit. Pertrushin teaches the use of an ADC in an audio processing circuit (Col. 53, lines 4-5). It would have been obvious to one of ordinary skill in the art at the time of the invention to add the ADC as taught by Pertrushin in the pen device of O'Donnell in order to convert analog microphone signal to a digital computer signal to perform voice recognition.

Regarding **Claims 36 and 45**, O'Donnell fails to teach the use of a digital signal processor in the audio processing circuit. Pertrushin teaches the use of a DSP in an audio processing circuit (Col. 53, lines 4-5). It would have been obvious to one of ordinary skill in the art at the time of the invention to add the DSP as taught by Pertrushin in the pen device of O'Donnell so that the digital sound can be analyzed for command matches.

Claims 32 and 41 rejected under 35 U.S.C. 103(a) as being unpatentable over O'Donnell (US 6,486,875) in view of Silverbrook (US 6,238,043) as applied to Claims 29, 30, 33, 34, 37, 38, 39, 42, 43 and 46 above, and further in view of Ebeling (US 6,199,292).

Regarding **Claims 32 and 41**, O'Donnell's fails to teach an antenna used also as the clip for a pen. Ebeling teaches that an antenna can be used as a clip for a pen. It would have been obvious to one of ordinary skill in the art to modify O'Donnell's pen device with a Clip/Antenna as taught by Ebeling in order to allow the pen device to be attached to a shirt pocket (Ebeling, Col. 5 lines 2-5).

Claims 19, 20, 25-28, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Donnell (US 6,486,875) in view Ebeling (US 6,199,292), Silverbrook (US 6,238,043) and Pertrushin (US 6,151,571).

Regarding **Claims 19, 28 and 47**, O'Donnell teaches a mobile wireless pen-shaped housing computer input device enabled to interact with a computer (Fig. 1 Col. 3 lines 19-21), a pen structure that includes an audio activation means (element 33) for transmitting audio instruction to the computer (Col. 3 lines 19-21).

O'Donnell fails to teach an antennae clip. Ebeling teaches that an antenna can be used as a clip for a pen. It would have been obvious to one of ordinary skill in the art to modify O'Donnell's pen device with a Clip/Antenna as taught by Ebeling in order to allow the pen device to be attached to a shirt pocket (Ebeling, Col. 5 lines 2-5).

O'Donnell fails to teach a first and second selective detachable structures, where the first structure includes a means for attachment to a user and for functioning as an antennae, and the second structure contains as least one removable function modules including one of an ink pen, a lead pencil module, a laser pointer module, or a roller ball mouse module. Silverbrook, on the other hand, teaches a pen shaped modular device that includes interchangeable function modules (Figs. 1-12 and Col. 3 lines 34-42). It would have been obvious one of ordinary skill in the art at the time of the invention to modify O'Donnell's invention to accept various pen modules such as laser pointers (Silverbrook, Fig. 7) and writing implement (Silverbrook, Fig. 11), because these additional modules are provided to add versatility to the invention as laser and writing instruments are commonly incorporated into pen-like structures (Col. 5 lines 1-2).

O'Donnell fails to teach the use of speech to control the power state of the computer. Pertrushin teaches a means for controlling power generated in the computer via the audio activation means (Pertrushin Col. 53 lines 24-45). It would have been obvious to one of ordinary skill in the art at the time of the invention to use Pertrushin's power controlling feature in the pen device of O'Donnell to simplify the interface between the user and the computer.

Regarding **Claim 20**, O'Donnell teaches an input device that includes a wireless transmitter (element 27) that communicates with the computer, the computer having a wireless receiver to cooperate with and receive audio instructions from the wireless transmitter (Col. 4 lines 42-48).

Regarding **Claim 25**, O'Donnell fails to teach the use of an ADC in the audio processing circuit. Pertrushin teaches the use of an ADC in an audio processing circuit (Col. 53, lines 4-5). It would have been obvious to one of ordinary skill in the art at the time of the invention to add the ADC as taught by Pertrushin in the pen device of O'Donnell in order to convert analog microphone signal to a digital computer signal to perform voice recognition.

Regarding **Claim 26**, O'Donnell fails to teach the use of a digital signal processor in the audio processing circuit. Pertrushin teaches the use of a DSP in an audio processing circuit (Col. 53, lines 4-5). It would have been obvious to one of ordinary skill in the art at the time of the invention to add the DSP as taught by Pertrushin in the pen device of O'Donnell so that the digital sound can be analyzed for command matches.

Art Unit: 2629

Regarding **Claim 27**, O'Donnell fails to teach a command buffer memory.

Pertrushin teaches the use of a command memory buffer used in the speed recognition system (Col. 40 lines 14-17). It would have been obvious to one of ordinary skill in the art to include the memory buffer in O'Donnell's pen device so that speech command scan e analyzed and recognized.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Donnell (US 6,486,875) in view Ebeling (US 6,199,292), Silverbrook (US 6,238,043) and Pertrushin (US 6,151,571) as applied to Claims 19, 20, 25-28, and 47 above, and further in view of Van Ruymbeke (US 6,380,930).

Regarding **Claims 21**, O'Donnell teaches the use of wireless data transmission, but fails to teach the use of Bluetooth technology. O'Donnell teaches that TF is not the only wireless transmission alternative and leaves the particulars of the wireless transmission to those familiar to the art (O'Donnell Col. 4 lines 42-44).

Van Ryumbeke teaches that Bluetooth is a well-known universal wireless interface between computer devices (Col. 1 lines 28-34). It would have been obvious to one of ordinary skill in the art at the time of the invention to use Bluetooth wireless transmission in O'Donnell's invention to assist with the portability of the pen device from system to system.

Response to Arguments

Applicant's arguments filed January 9th, 2006 have been fully considered but they are not persuasive.

Regarding independent **Claims 19, 29, 38 and 47**, the applicant argues that the combination of O'Donnell in view of Silverbrook is improper because such a combination would destroy the functionality of O'Donnell. The examiner respectfully disagrees. Specifically the examiner is using O'Donnell for the main teaching of the electronic components of the pen device. Silverbrook is used for the teaching of modularity of the pen tip. Just because the functionality of the original pen tip can be modularly replaced with another pen tip does not mean that the original functionality is destroyed.

The applicant makes no further arguments regarding the dependent claims.

Regarding the rejection of Claim 31, there was a typographical error in the previous office action. Specifically the rejection "Claim 40 is rejected under" and "In reference to claims 21 and 40" should instead read -- Claims 31 and 40 are rejected under -- and -- In reference to claims 31 and 40 --. This is clearly a typo as claim 21 is addressed later in the office action and is dependent from another claim tree. The typo has since been corrected; this is not considered new grounds of rejection.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

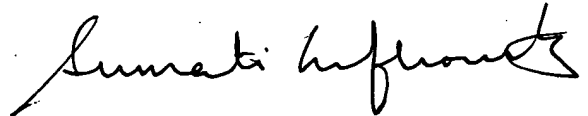
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ke Xiao whose telephone number is (571) 272-7776. The examiner can normally be reached on Monday through Friday from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2629

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

January 24th, 2007 - kx -



SUMATI LEFKOWITZ
SUPERVISORY PATENT EXAMINER